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(54) **MULTI-LAYERED CORES FOR GOLF BALLS BASED ON IONOMERS**

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See application file for complete search history.

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(57) **ABSTRACT**

Multi-piece golf balls having a solid core of at least one layer and cover of at least one layer are provided. Thermoplastic ethylene acid copolymer ionomer compositions are used to form the core layers. Preferably, the ball contains a dual-core having an inner core and surrounding outer core layer. Low modulus and high modulus ionomer compositions may be used in the core structure. In one embodiment, a first ionomer composition is used to form the inner core and a second ionomer composition is used to form the outer core, and the flex modulus of the first composition is greater than the flex modulus of the second composition. The ionomer compositions have varying levels of hardness. The resulting ball has high resiliency and rebounding properties.

**14 Claims, 2 Drawing Sheets**

